

Abstract of the Disclosure

In a scanning optical system including a polygon mirror for dynamically deflecting N laser beams corresponding to N color components and an imaging optical system for converging the laser beams into spot beams on N photosensitive drums respectively, the imaging optical system includes: a front lens group for converging the laser beams principally in a main scanning direction while deflecting the beams to deviate from its optical surface reference axis; and N rear lens groups for converging the laser beams principally in an auxiliary scanning direction respectively. The rear surface of the front lens group and front surfaces of the rear lens groups are formed as two-dimensional polynomial aspherical surfaces. Concretely, the rear surface is formed as a step-like optical surface having N discrete areas of different heights. By the system, the laser beams are separated sufficiently to match the intervals between the photosensitive drums without the need of long optical paths, without deteriorating the scanning performance, and without the need of using mirrors which cause color misregistration and increase costs.